

Laura Lazzarini

List of Publications by Year in descending order

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92
papers

1,683
citations

218381

26
h-index

329751

37
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93
all docs

93
docs citations

93
times ranked

2332
citing authors

#	ARTICLE	IF	CITATIONS
1	Strain relaxation in graded composition $\text{In}_x\text{Ga}_{1-x}\text{As}/\text{GaAs}$ buffer layers. <i>Journal of Applied Physics</i> , 1999, 86, 4748-4755.	1.1	89
2	Low-temperature In_2O_3 nanowire luminescence properties as a function of oxidizing thermal treatments. <i>Nanotechnology</i> , 2007, 18, 355707.	1.3	78
3	Structural and optical study of SnO_2 nanobelts and nanowires. <i>Materials Science and Engineering C</i> , 2005, 25, 625-630.	3.8	75
4	Efficiency Improvement of DSSC Photoanode by Scandium Doping of Mesoporous Titania Beads. <i>Journal of Physical Chemistry C</i> , 2013, 117, 25276-25289.	1.5	69
5	On the formation of antiphase domains in the system of GaAs on Ge. <i>Journal of Crystal Growth</i> , 1996, 163, 195-202.	0.7	61
6	Synthesis and characterization of photocatalytic hydrophobic hybrid TiO_2 - SiO_2 coatings for building applications. <i>Building and Environment</i> , 2017, 111, 72-79.	3.0	60
7	In-Plane Bandgap Engineering by Modulated Hydrogenation of Dilute Nitride Semiconductors. <i>Advanced Materials</i> , 2006, 18, 1993-1997.	11.1	51
8	On the sublattice location of GaAs grown on Ge. <i>Journal of Applied Physics</i> , 1994, 76, 5748-5753.	1.1	50
9	Unpredicted Nucleation of Extended Zinc Blende Phases in Wurtzite ZnO Nanotetrapod Arms. <i>ACS Nano</i> , 2009, 3, 3158-3164.	7.3	49
10	Visible and Infra-red Light Emission in Boron-Doped Wurtzite Silicon Nanowires. <i>Scientific Reports</i> , 2014, 4, 3603.	1.6	46
11	Nucleation and growth of SnO_2 nanowires. <i>Journal of Crystal Growth</i> , 2005, 275, e2083-e2087.	0.7	43
12	Extended functionality of ZnO nanotetrapods by solution-based coupling with CdS nanoparticles. <i>Journal of Materials Chemistry</i> , 2012, 22, 5694.	6.7	42
13	Structural and optical investigation of $\text{InAs}_x\text{P}_{1-x}/\text{InP}$ strained superlattices. <i>Journal of Applied Physics</i> , 1998, 83, 1058-1077.	1.1	39
14	Low-temperature germanium thin films on silicon. <i>Optical Materials Express</i> , 2011, 1, 856.	1.6	39
15	Synthesis and characterization of nanocrystalline TiO_2 with application as photoactive coating on stones. <i>Environmental Science and Pollution Research</i> , 2014, 21, 13264-13277.	2.7	37
16	Large-area self-catalysed and selective growth of ZnO nanowires. <i>Nanotechnology</i> , 2008, 19, 325603.	1.3	36
17	Luminescence of GaAs/AlGaAs core-shell nanowires grown by MOVPE using tertiarybutylarsine. <i>Journal of Crystal Growth</i> , 2008, 310, 5114-5118.	0.7	35
18	Metal Organic Chemical Vapor Deposition of Phase Change $\text{Ge}_1\text{Sb}_2\text{Te}_4$ Nanowires. <i>Nano Letters</i> , 2012, 12, 1509-1515.	4.5	34

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19	â€œStainlessâ€•Gold Nanorods: Preserving Shape, Optical Properties, and SERS Activity in Oxidative Environment. ACS Applied Materials & Interfaces, 2015, 7, 18794-18802.	4.0	33
20	Preparing the Way for Doping Wurtzite Silicon Nanowires while Retaining the Phase. Nano Letters, 2013, 13, 5900-5906.	4.5	32
21	The effect of the growth rate on the low pressure metalorganic vapour phase epitaxy of GaAs/Ge heterostructures. Journal of Crystal Growth, 1992, 125, 440-448.	0.7	31
22	Vertical coupling and transition energies in multilayerInAs/GaAsquantum-dot structures. Physical Review B, 2000, 62, 10220-10225.	1.1	30
23	Ag-functionalized nanocrystalline cellulose for paper preservation and strengthening. Carbohydrate Polymers, 2020, 231, 115773.	5.1	29
24	Self-aggregated InAs quantum dots in GaAs. Journal of Applied Physics, 1998, 83, 5529-5535.	1.1	27
25	Nanoscale mapping of plasmon and exciton in ZnO tetrapods coupled with Au nanoparticles. Scientific Reports, 2016, 6, 19168.	1.6	27
26	In-catalyzed growth of high-purity indium oxide nanowires. Chemical Physics Letters, 2007, 445, 251-254.	1.2	26
27	Structural characterization of InGaAs/InP heterostructures grown under compressive and tensile stress. Applied Surface Science, 2002, 188, 36-48.	3.1	23
28	Crystal structure assessment of Geâ€•Sbâ€•Te phase change nanowires. Nanoscale, 2013, 5, 1557.	2.8	23
29	The effects of roughness and composition variation at the InP/InGaAs and InGaAs/InP interfaces on CBE grown quantum wells. Journal of Crystal Growth, 1993, 127, 189-193.	0.7	22
30	Cathodoluminescence spectroscopy of single SnO ₂ nanowires and nanobelts. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 2963-2970.	0.8	20
31	Efficiency improvement and full characterization of dye-sensitized solar cells with MWCNT/anatase Schottky junctions. Journal of Power Sources, 2012, 204, 249-256.	4.0	18
32	Electrical and optical characterization of Er-doped silicon grown by liquid phase epitaxy. Journal of Applied Physics, 1999, 85, 1582-1586.	1.1	15
33	Weak Antilocalization in Granular Sb ₂ Te ₃ Thin Films Deposited by MOCVD. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800155.	1.2	15
34	Epitaxial and large area Sb ₂ Te ₃ thin films on silicon by MOCVD. RSC Advances, 2020, 10, 19936-19942.	1.7	15
35	Local structural investigation of buried InAsxP1âˆ’x/InP interfaces. Journal of Applied Physics, 1994, 76, 4581-4586.	1.1	14
36	Structural properties of GaAs/Ge heterostructures as a function of growth conditions. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1994, 28, 502-506.	1.7	14

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37	Growth parameter optimization of short period (< 50 Å...) InGaAs/InP short period superlattices by chemical beam epitaxy for photonic devices. <i>Journal of Crystal Growth</i> , 1994, 136, 293-296.	0.7	14
38	Properties and structure of antiphase boundaries in GaAs/Ge solar cells. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1996, 42, 204-207.	1.7	14
39	Selective ion-channeling study of misfit dislocation grids in semiconductor heterostructures: Theory and experiments. <i>Physical Review B</i> , 1997, 56, 6895-6910.	1.1	14
40	A Novel Sb ₂ Te ₃ Polymorph Stable at the Nanoscale. <i>Chemistry of Materials</i> , 2015, 27, 4368-4373.	3.2	13
41	Metalorganic vapor phase epitaxial growth and structural characterization of GaAs/InP heterostructures. <i>Journal of Electronic Materials</i> , 1994, 23, 153-158.	1.0	12
42	Experimental Thermodynamics of High Temperature Transformations in Single-Walled Carbon Nanotube Bundles. <i>Journal of the American Chemical Society</i> , 2009, 131, 12474-12482.	6.6	12
43	Evidence of Native Cs Impurities and Metal-Insulator Transition in MoS ₂ Natural Crystals. <i>Advanced Electronic Materials</i> , 2016, 2, 1600091.	2.6	12
44	Growth and characterization of ¹²⁵ I-Ga ₂ O ₃ nanowires obtained on not-catalyzed and Au/Pt catalyzed substrates. <i>Journal of Crystal Growth</i> , 2017, 457, 255-261.	0.7	12
45	Chemical Differentiation of Carbon Nanotubes in a Carbonaceous Matrix. <i>Chemistry of Materials</i> , 2008, 20, 4126-4134.	3.2	11
46	High-Temperature Determination of Surface Free Energy of Copper Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2010, 114, 12117-12124.	1.5	11
47	Cathodoluminescence evidence of stress-induced outdiffusion of beryllium in AlGaAs/GaAs heterojunction bipolar transistors. <i>Journal Physics D: Applied Physics</i> , 1998, 31, 3004-3008.	1.3	10
48	Electron-beam-induced current and cathodoluminescence characterization of InGaAs strain-balanced multiquantum well photovoltaic cells. <i>Journal of Applied Physics</i> , 2003, 94, 6341-6345.	1.1	10
49	Photocatalytic N-doped TiO ₂ for self-cleaning of limestones. <i>European Physical Journal Plus</i> , 2019, 134, 1.	1.2	10
50	High-Density Sb ₂ Te ₃ Nanopillars Arrays by Templated, Bottom-Up MOCVD Growth. <i>Small</i> , 2019, 15, 1901743.	5.2	10
51	ALD growth of ultra-thin Co layers on the topological insulator Sb ₂ Te ₃ . <i>Nano Research</i> , 2020, 13, 570-575.	5.8	10
52	Electron-beam-induced dislocations in GaAs and InP single crystals. <i>Journal of Applied Physics</i> , 1989, 66, 2947-2951.	1.1	9
53	Structural Properties of H-Implanted InP Crystals. <i>Journal of the Electrochemical Society</i> , 1993, 140, 2034-2038.	1.3	9
54	Cathodoluminescence characterization of SnO ₂ nanoribbons grown by vapor transport technique. <i>Materials Science in Semiconductor Processing</i> , 2006, 9, 331-336.	1.9	9

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55	Dislocations in medium to highly mismatched III-V epitaxial heterostructures. Journal of Crystal Growth, 1993, 126, 133-143.	0.7	8
56	Zn _{0.85} Cd _{0.15} Se active layers on graded-composition In _x Ga _{1-x} As buffer layers. Journal of Applied Physics, 1999, 85, 8160-8169.	1.1	8
57	Study of GaAs spacer layers in InAs/GaAs vertically aligned quantum dot structures. Thin Solid Films, 2000, 380, 224-226.	0.8	8
58	Lanthanide-Doped Scandia and Yttria Cathodoluminescent Films: A Comparative Study. Chemistry of Materials, 2008, 20, 5666-5674.	3.2	8
59	High Temperature Stability of Onion-Like Carbon vs Highly Oriented Pyrolytic Graphite. PLoS ONE, 2014, 9, e105788.	1.1	7
60	Electron Microscopy and X-Ray Diffraction Determinations of Strain Release in InGaAs/GaAs Superlattices Grown by Molecular Beam Epitaxy. Journal of the Electrochemical Society, 1993, 140, 2422-2427.	1.3	6
61	Optimization of growth parameters of short period InGaAs/InP superlattices for Wannier-Stark modulators. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1994, 28, 305-309.	1.7	6
62	Impact of electron confinement on the lasing properties of ZnS/ZnSe superlattices. Applied Physics Letters, 1997, 70, 2943-2945.	1.5	6
63	Study of degradation mechanisms in compound semiconductor based devices by SEM-cathodoluminescence. Microelectronics Reliability, 1998, 38, 1199-1210.	0.9	6
64	On the morphology and composition of InAs/GaAs quantum dots. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 91-92, 264-268.	1.7	6
65	Excitonic recombination in superstoichiometric nanocrystalline TiO ₂ grown by cluster precursors at room temperature. Physical Chemistry Chemical Physics, 2012, 14, 5705.	1.3	6
66	Vapor phase epitaxy of antimonene-like nanocrystals on germanium by an MOCVD process. Applied Surface Science, 2021, 535, 147729.	3.1	6
67	A TEM and SEM-cathodoluminescence study of oval defects in graded InGaAs/GaAs buffer layers. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2001, 80, 120-124.	1.7	5
68	Extended defects in InGaAs/InGaAs strain-balanced multiple quantum wells for photovoltaic applications. Journal of Physics Condensed Matter, 2002, 14, 13367-13373.	0.7	5
69	Single-step Au-catalysed synthesis and microstructural characterization of core-shell Ge/InTe nanowires by MOCVD. Materials Research Letters, 2018, 6, 29-35.	4.1	5
70	Green Extraction of Cellulose Nanocrystals of Polymorph II from Cynara scolymus L.: Challenge for a Zero Waste Economy. Crystals, 2022, 12, 672.	1.0	5
71	Crystal structure assessment of Ge-Sb-Te nanowires. Materials Science in Semiconductor Processing, 2017, 65, 77-87.	1.9	4
72	Ultra-small FeS ₂ nanoparticles for highly efficient chemoselective transfer hydrogenation of nitroarenes. New Journal of Chemistry, 2021, 45, 17808-17815.	1.4	4

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73	Structural characterization techniques for the analysis of semiconductor strained heterostructures. <i>Mikrochimica Acta</i> , 1994, 114-115, 431-440.	2.5	3
74	Power-dependent cathodoluminescence in III-V nitrides heterostructures: from internal field screening to controlled band-gap modulation. , 2008, , 209-248.		3
75	Scanning electron acoustic microscopy of misfit dislocations in InGaAs/GaAs superlattices. <i>Journal Physics D: Applied Physics</i> , 1993, 26, 1537-1539.	1.3	2
76	Quantitative studies of beam-induced defects in III-V compounds by cathodoluminescence and transmission electron microscopy. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1994, 24, 130-134.	1.7	2
77	Electrical and optical analyses of Er-doped silicon grown by liquid-phase epitaxy. <i>Journal of Luminescence</i> , 1998, 80, 343-346.	1.5	2
78	On the Role of Oxygen Vacancies in the Determination of the Gas-Sensing Properties of Tin-Oxide Nanowires. <i>Materials Research Society Symposia Proceedings</i> , 2006, 915, 1.	0.1	2
79	High-Temperature Resistivity of Dense Mats of Single-Walled Carbon Nanotube Bundles. <i>Journal of Physical Chemistry C</i> , 2011, 115, 11023-11029.	1.5	2
80	Cathodoluminescence of Self-assembled Nanosystems. , 2013, , 557-601.		2
81	InZnO nanorods obtained via zinc vapour phase deposition on liquid indium seeded substrates. <i>CrystEngComm</i> , 2014, 16, 1696.	1.3	2
82	Electron Microscopy and X-Ray Diffraction Characterization of InP/GaAs Grown by Atomic Layer Epitaxy. <i>Journal of the Electrochemical Society</i> , 1993, 140, 1776-1779.	1.3	1
83	Mechanisms of strain release in molecular beam epitaxy grown InGaAs/GaAs buffer heterostructures. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1994, 28, 510-514.	1.7	1
84	Investigation of the recombination dynamics in low In-content InGaN MQWs by means of cathodoluminescence and photoluminescence excitation. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005, 2, 817-821.	0.8	1
85	Transmission Electron Microscopy Techniques for Imaging and Compositional Evaluation in Semiconductor Heterostructures. , 2013, , 413-465.		1
86	Investigation of Strain Relaxation Mechanisms in InGaAs/GaAs Single Layer Films. <i>Microscopy Microanalysis Microstructures</i> , 1995, 6, 491-498.	0.4	1
87	Transition from island to continuous InP layer growth on (001) GaAs by MOCVD. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1994, 28, 214-218.	1.7	0
88	Hydrogen-induced Nitrogen Passivation in Dilute Nitrides: A Novel Approach to Defect Engineering. <i>Materials Research Society Symposia Proceedings</i> , 2007, 994, 1.	0.1	0
89	The Challenge for Large-scale Vapor-phase Growths of Not-catalyzed ZnO Nanostructures: Purity vs. Yield. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1174, 43.	0.1	0
90	Determination of the atomic stacking sequence of Ge-Sb-Te nanowires by HAADF STEM. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1512, 1.	0.1	0

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91	Transmission electron microscopy techniques for imaging and compositional evaluation in semiconductor heterostructures. , 2008, , 133-173.		0
92	Degradation mechanisms in heterostructure devices and their correlation with defects. , 2017, , 503-514.		0